# GENERAL INDEX

Classified entries will be found under Contributors and Reviews. New names and names of new genera and species are printed in **bold-face** type.


## A

Aborting fruits of Prunus 505

Abramson, H. A., "Electrokinetic phenomena and their application to biology and medicine" 380

Acorus calamus, seed and seedling 758

After-ripening treatment and germination 372

Alternation of generations in Ectocarpus siliculosus 421

Anatomy, of aerial roots of Vitis 367; of apple and peach roots 581; of vegetative organs of parsnip 44

Apple roots, temperature, growth, anatomy, and metabolism 581

Aquatic plants, chemical composition 186

Arber, Agnes, "The Gramineae: A study of cereal, bamboo, and grass" 383

Arnold, C. A. 180

Arthur, J. C., "Manual of the rusts in United States and Canada" 190

Ascomycetes, systematics 192

Avery, G. S. Jr. 314

## B

Bailey, L. H. and Ethel Z., "Hortus: a concise dictionary of gardening, general horticulture and cultivated plants in North America" 771

Baker, F. S., "Theory and practice of silviculture" 576

Baldwin, H. I. 372

Baldwin, J. T. Jr. 558

Bannan, M. W. 260

Basidiomycetae, spore germination 282

Beal, J. M. 196, 771

Beetles, pines infested with 709

Benedict, H. M. 330

Berry, E. W. 751

Bessey, E. A., "A textbook of mycology" 768

Bidens **collina** 144; **hivoana** 143; **kivuensis** 145; **onisciformis** 144

Biochemical laboratory methods 774

Biswell, H. H. 676

Blakeslee, A. F. 521

Botanical Review 577

Braun-Blanquet, J., "Flora von Graubünden" 771

Brodie, H. J. 533

Brown, C. A. 640

Brown, H. P., "Identification of the commercial timbers of the United States" 384

Bruce, D., "Forest mensuration" 580

Buell, M. F. 758

Buller, A. H. R., "Researches on fungi" 377, 767

## C

Cactaceae, chromosome numbers 565

Caird, R. W. 709

Calcium and ultraviolet radiation 330

California, southern, botany 773

Callixylon **whiteanum** 180

Cambial growth of certain conifers 73

Carotenoids, 378; methods for purification 447

Carya, embryogeny 93

Chamberlain, C. J. 191, 579

Chemical composition of aquatic plants 186

Chimaeras, plant 193

Chromosome numbers, of Cactaceae 565; numbers in Sedum 558

Chromosomes, of the soy bean 189; of Tradescantia 353

Cinnamomeae, Linneons in the American 228

Color of pollen in Petunia 342
Compositae, taxonomy 136
Conifers, cambial growth of certain 73; phylogeny 195
Contributors: Arnold, C. A. 180; Avery, G. S. Jr. 314; Baldwin, H. I. 372; Baldwin, J. T. Jr. 558; Bannan, M. W. 260; Beal, J. M. 196, 771; Benedict, H. M. 330; Berry, E. W. 751; Biswell, H. H. 676; Blakeslee, A. F. 521; Brodie, H. J. 533; Brown, C. A. 640; Buell, M. F. 758; Caird, R. W. 709; Chamberlain, C. J. 191, 579; Daniel, H. A. 186; Daugherty, L. H. 363; Edwards, T. I. 118; Erlanson, Eileen W. 197; Feng, C. F. 485; Ferguson, Margaret C. 342; Fuller, G. D. 195, 386, 387, 576, 577, 578, 771; Gould, Sophia A. 118; Hamly, D. H. 755; Harper, H. J. 186; Harrold, T. J. 505; Hayward, H. E. 383, 384, 385; Hougen, V. H. 389; Humphrey, L. M. 353; Hunt, Barbara 342; Imai, Y. 571; Kaufmann, F. H. O. 282; Kienholz, Raymond 73; Korstian, C. F. 767; Kraus, E. J. 770, 771; Kribs, D. A. 547; Langdon, LaDema M. 93; Lindstrom, E. W. 766; Link, G. K. K. 190, 192; Link, K. P. 468; Martin, G. W. 377, 767, 768; Miller, E. S. 447; Miyake, K. 571; Nightingale, G. T. 581; Noé, A. C. 194, 195, 196, 388, 773; Oesting, R. B. 772; O'Hanlon, Sister Mary Ellen 154; Olmsted, C. E. 381, 387, 580, 773; Papenfuss, G. F. 421; Pearl, Raymond 118; Ramaley, Francis 165, 579; Rees-Leonard, Olive L. 734; Satina, Sophia 521; Sax, Karl 353; Sherff, E. E. 136; Shull, C. A. 175, 193, 378, 380, 388, 575, 576, 774; Smith, A. H. 533; Stockwell, P. 565; Turner, L. M. 367; Veatch, C. 189; Voss, John 3; Voth, P. D. 298, 578; Walker, J. C. 468; Warning, Winifred C. 44; Weaver, J. E. 389; Weldon, M. D. 389
Coreopsis **curtisii** 146
Cosmos **herzogii** 148; **mattfeldii** 148
Cotton, genetical and cytological study of species hybrids 485
Cowles, Henry Chandler, retirement as editor 1
Crane, M. B., "The genetics of garden plants" 766
Cucumis seedlings, influence of temperature and nutrition on growth and life duration 118
Cycads, fossil 773
Cytological effects of a gene in Datura 521; study of Ectocarpus 421; study of species hybrids of cotton 485
Cytology, general plant 771

## D

Daniel, H. A. 186
Datura, cytological effects of a gene 521
Daugherty, L. H. 363
Dicotyledons, salient lines of structural specialization in wood rays 547
Dumortiera, comparative morphology 154
Dyad formation in sporogenesis 521

## E

Ecology of forest trees 676
Economic plants 385
Ectocarpus siliculosus, alternation of generations 421
Edwards, T. I. 118
Electrokinetic phenomena 380
Embryogeny of Carya and Juglans 93
Ephedra, vegetative phases 298
Erlanson, Eileen W. 197
Excretion in higher plants 575

## F

Feng, C. F. 485
Ferguson, Margaret C. 342
Ferns of the northwest 579
Fisher, R. A., "Statistical methods for research workers" 576
Flammula, transferred to Pholiota 533
Flora of Buffalo and vicinity 387
Florin, R., work of 194
Forest mensuration 580
Fossil, Cycadophytes and Cycadofilicales 194; pollen deposits and postglacial migration of forests 3; wood from Arizona 363
Frey-Wyssling, A., "Die Stoffausscheidung der höheren Pflanzen" 575
Frye, T. C., "Ferns of the northwest" 579
Fuller, G. D. 195, 386, 387, 576, 577, 578, 771
Fungi, reproduction 767; researches 377

## G

Garratt, G. A., "Systematic anatomy of the woods of the Myristicaceae" 196

Gause, G. F., "The struggle for existence" 772
Genetical study of species hybrids of cotton 485
Genetics of garden plants 766
Germination, of Basidiomycetae spores 282; of white pine 372
Gould, Sophia A. 118
Gramineae 383
Grout, A. J., "Moss flora of North America north of Mexico" 578
Gymnospermen, Embryologie der 191
Gymnosperms, origin and cellular character of xylem rays 260

## H

Haemolytic systems 388
Hagerup, O., "Zur Organogenie und Phylogenie der Koniferen-Zapfen" 195
Hamly, D. H. 755
Harper, H. J. 186
Harris, J. A., "The physico-chemical properties of plant saps in relation to phytogeography" 766
Harrold, T. J. 505
Harvey, R. B., "An annotated bibliography of the low temperature relations of plants" 774
Hawley, R. C., "The practice of silviculture with particular reference to its application in the United States of America" 576
Hayward, H. E. 383, 384, 385
Holman, R. M., "A textbook of general botany" 196
Hortus 771
Hougen, V. H. 389
House, H. D., "Wild flowers" 580
Hryniewiecki, B., "Précis de l'histoire de la botanique en Pologne" 578
Humphrey, L. M. 353
Hunt, Barbara 342
Hutchinson, J., "The families of flowering plants. Vol. II. Monocotyledons" 381

## I

Illumination and growth 579
Imai, Y. 571
Infestation of pines 709

## J

Juglans, embryogeny 93

## K

Kaufmann, F. H. O. 282
Kienholz, Raymond 73
Korstian, C. F. 767
Kraus, E. J. 770, 771
Krenke, N. P., "Wundkompensation, Transplantation und Chimären bei Pflanzen" 193
Kribs, D. A. 547

## L

Labiatae, taxonomy 136
Langdon, LaDema M. 93
Laurelia **guinazui** 752
Lawrence, W. J. C., "The genetics of garden plants" 766
Light, influence of supplemental on blooming 165; line in Melilotus alba 755
Lindstrom, E. W. 766
Link, G. K. K. 190, 192
Link, K. P. 468
Linneons in the American Cinnamomeae 228

## M

MacBride, T. H., "The Myxomycetes" 192
Macrogametophyte of Solanum tuberosum 734
Martin, G. W. 377, 767, 768; "The Myxomycetes" 192
Melilotus alba, light line in 755
Methods, for the purification of the common carotenoids 447; statistical, for research workers 576
Migration of forests, postglacial 3
Miller, E. S. 447
Miyake, K. 571
Molisch, Hans, "Erinnerungen und Welteindrücke eines Naturforschers" 388
Monimiaceae and a new Laurelia 751
Monocotyledons, families of 381
Morrow, C. A., "Biochemical laboratory methods for students of the biological sciences" 774
Moss flora of North America 578

Muenscher, W. C., "Weeds" 771
Munz, P. A., "A manual of southern California botany" 773
Mycological text, new 768
Myrrh 196
Myxomycetes 192

## N

Nannfeldt, J. A., "Studien über die Morphologie und Systematik der Nichtlichenisierten Inoperculaten Discomyceten" 192
Nightingale, G. T. 581
Noé, A. C. 194, 195, 196, 338, 773
Nomenclature, committee on, "Glossary of terms used in describing woods" 195
Nutrition and growth of Cucumis seedlings 118

## O

Odontia, morphology and biology 640
Oesting, R. B. 772
O'Hanlon, Sister Mary Ellen 154
Olmsted, C. E. 381, 387, 580, 773
Onion bulb parasites and toxicity of phenolic compounds 468

## P

Panchaud, J., "Action du milieu extérieur sur le métabolisme végétal" 579
Panshin, A. J., "Identification of the commercial timbers of the United States" 384
Papenfuss, G. F. 421
Parsnip, anatomy of vegetative organs 44
Peach roots, temperature and growth 581
Pearl, Raymond 118
Persistence of subspecific types of Xanthium under field conditions 175
Petunia, pollen color 342
Pharbitis nil, maternal transmission of mutated plastids 571
Phenols, toxic 468
Pholiota (Flammula) polychroa 533
Phosphorus and ultraviolet radiation 330
Phyllostegia **bracteata** 137; **helleri** 138; **lantanoides** 137; **rockii** 139; **wawrana** 139
Physico-chemical properties of plant saps 766
Pines infested with bark beetles 709
Pinus, seed germination 372
Poland, botany in 578
Pollen, deposits and postglacial migration of forests 3; of Petunia 342
Ponder, Eric, "The mammalian red cell and the properties of haemolytic systems" 388
Postglacial migration of forests and fossil pollen deposits 3
Prunus, aborting fruits 505
Purification of the common carotenoids, methods for 447

## R

Radiation, ultraviolet, and calcium and phosphorus contents 330
Ramaley, F. 165, 579
Raunkiaer, C., "The life forms of plants and statistical plant geography" 387
Rays in gymnosperms, origin and cellular character of xylem 260
Record, S. J., "Identification of the timbers of temperate North America" 386; "Rôle of wood anatomy in taxonomy" 196
Rees-Leonard, Olive L. 734
Reviews: Abramson's "Electrokinetic phenomena and their application to biology and medicine" 380; Arber's "The Gramineae: A study of cereal, bamboo, and grass" 383; Arthur's "Manual of the rusts in United States and Canada" 190; Bailey's "Hortus: a concise dictionary of gardening, general horticulture and cultivated plants in North America" 771; Baker's "Theory and practice of silviculture" 576; Bessey's "A textbook of mycology" 768; Braun-Blanquet's "Flora von Graubünden" 771; Brown's "Identification of the commercial timbers of the United States" 384; Bruce's "Forest mensuration" 580; Buller's "Researches on fungi" 377, 767; Crane's "The genetics of garden plants" 766; Fisher's "Statistical methods for research workers" 576; Frey-Wyssling's "Die Stoffausscheidung der höheren Pflanzen" 575; Frye's "Ferns of the northwest" 579; Garratt's "Systematic anatomy of the woods of the Myristicaceae" 196; Gause's "The struggle for existence" 772; Grout's "Moss flora of North America north of Mexico" 578; Ha-

gerup's "Zur Organogenie und Phylogenie der Koniferen-Zapfen" 195; Harris's "The physico-chemical properties of plant saps in relation to phytogeography" 766; Harvey's "An annotated bibliography of the low temperature relations of plants" 774; Hawley's "The practice of silviculture with particular reference to its application in the United States of America" 576; Holman's "A textbook of general botany" 196; House's "Wild flowers" 580; Hryniewiecki's "Précis de l'histoire de la botanique en Pologne" 578; Hutchinson's "The families of flowering plants. Vol. II. Monocotyledons" 381; Krenke's "Wundkompensation, Transplantation und Chimären bei Pflanzen" 193; Lawrence's "The genetics of garden plants" 766; MacBride's "The Myxomycetes" 192; Martin's "The Myxomycetes" 192; Molisch's "Erinnerungen und Welteindrücke eines Naturforschers" 388; Morrow's "Biochemical laboratory methods for students of the biological sciences" 774; Muenscher's "Weeds" 771; Munz's "A manual of southern California botany" 773; Nannfeldt's "Studien über die Morphologie und Systematik der Nichtlichenisierten Inoperculaten Discomyceten" 192; Panchaud's "Action du milieu extérieur sur le métabolisme végétal" 579; Panshin's "Identification of the commercial timbers of the United States" 384; Ponder's "The mammalian red cell and the properties of haemolytic systems" 388; Raunkiaer's "The life forms of plants and statistical plant geography" 387; Record's "Identification of the timbers of temperate North America" 386; Record's "Rôle of wood anatomy in taxonomy" 196; Robbins' "A textbook of general botany" 196; Rübel's "Flora von Graubünden" 771; Sandstrom's "Biochemical laboratory methods for students of the biological sciences" 774; Schnarf's "Embryologie der Gymnospermen" 191; Schumacher's "Forest mensuration" 580; Stanford's "Economic plants" 385; Steuer's "Myrrhe und Stakte" 196; Stout's "Day lilies" 577; Swingle's "A textbook of systematic botany" 195; Swingle's "Plant life" 770; Tischler's "Allgemeine Pflanzenkaryologie. Handbuch der Pflanzenanatomie" 771; Wieland's "Fossil cycads, with special reference to Raumeria reichenbachiana Goeppert sp. of the Zwinger of Dresden" 773; Zechmeister's "Carotenoide" 378; Zenkert's "The flora of the Niagara frontier region" 387

Revision of Rosa sp. 197

Robbins, W. W., "A textbook of general botany" 196

Root distribution, relation to organic matter in prairie soil 389; habits of certain deciduous forest trees 676

Roots, temperature and growth of apple and peach 581

Rosa, species revision 197

Rübel, Eduard, "Flora von Graubünden" 771

Rusts 190

## S

Sandstrom, W. M., "Biochemical laboratory methods for students of the biological sciences" 774

Satina, Sophia 521

Sax, Karl 353

**Schildera adamanica**, a new fossil wood 363

Schnarf, Karl, "Embryologie der Gymnospermen" 191

Schumacher, F. X., "Forest mensuration" 580

Sedum, somatic chromosome numbers 558

Sherff, E. E. 136

Shull, C. A. 175, 193, 378, 380, 388, 575, 576, 774

Silviculture 576

Smith, A. H. 533

Soil, effects on root habit 676; root distribution and organic matter in prairie 389

Solanum tuberosum, macrogametophyte 734

Soy bean, chromosomes 189

Spores of Basidiomycetae, germination 282

Stanford, E. E., "Economic plants" 385

Stenogyne **calycosa** 142; **scandens** 143; **sororia** 142

Steuer, R. O., "Myrrhe und Stakte" 196

Stockwell, P. 565

Stout, A. B., "Day lilies" 577

Swingle, D. B., "A textbook of systematic botany" 195; "Plant life" 770

Swiss flora 771
Systematic botany, textbook 195
Systematics of the Ascomycetes 192

T

Taxonomic descriptions, usefulness of wood in 195
Temperature and growth of apple and peach roots 581; and growth of Cucumis seedlings 118; low, relations of plants 774
Timbers, identification of commercial 384
Tischler, G., "Allgemeine Pflanzenkaryologie. Handbuch der Pflanzenanatomie" 771
Tobacco plants, structural responses to the practice of topping" 314
Topping tobacco plants 314
Toxicity of phenolic compounds to onion bulb parasites 468
Tradescantia, chromosomes 353
Turner, L. M. 367

U

Ultraviolet radiation and calcium and phosphorus contents 330

V

Veatch, C. 189
Vitis rotundifolia, anatomy of aerial roots 367
Voss, John 3
Voth, P. D. 298, 578

W

Walker, J. C. 468
Warning, Winifred C. 44
Weaver, J. E. 389
Weeds 771
Weldon, M. D. 389
Wieland, G. R., "Fossil cycads, with special reference to Raumeria reichenbachiana Goeppert sp. of the Zwinger of Dresden" 773
Wild flowers 580
Wood identification 386; rays of dicotyledons 547
Wound compensation 193

X

Xanthium, persistence of subspecific types under field conditions 175

Z

Zechmeister, L., "Carotenoide" 378
Zenkert, C. A., "The flora of the Niagara frontier region" 387